TRB A1F02 Newsletter

November 2003

Environmental Analysis in Transportation

Chairman's Message
Announcements
TRB Annual Meeting, January 11-15, 2004, Washington, D.C.
Subcommittee Reports
• TRB Task Force on Environmental Justice in Transporta
tion (A1T52) 2003 TRB Annual Meeting Summary
Website Subcommittee Goals, Objectives and Procedures
Features
• Regional Transportation Planning With a Difference:
Expanded Environmental Analysis, Cumulative Impacts
Analysis, GIS Growth Scenarios Modeling and Innovati
Public Participation Energize Planning in Merced Coun
California
• I-69 TCC
• The Texas Environmental Resource Stewards (TERS) 1.
• Environmental Streamlining Dynamics and Fundamen
tals
Editor's Notes
Newsletter Guidelines
Electronic Newsletter

Chairman's Message

by Mark Kross Missouri Department of Transportation

The similarities are striking. While crafting these comments, I also have been involved in planning Missouri's efforts to commemorate the bicentennial of the Lewis and Clark Expedition. At this season 200 years ago, the expedition had proceeded down the Ohio River from near Pittsburgh, through the Falls of the Ohio (Louisville, KY), and was nearing the confluence with the Mississippi River bordering Missouri. At Louisville, Clark and others had joined Lewis and continued downstream. Upon the Ohio, the "Corps of Discovery" had begun honing its multitude of skills and diversity of talents, transforming a gathering of individuals into a functioning unit. The journey up the Mississippi, adjoining the future state of Missouri, in November and December 1803 tested the skills of the Corps as they made their way to winter camp near St. Louis. After more members were recruited for the Corps during the winter of 1803-1804, it proceeded up the Missouri River beginning on May 14, 1804 and continued into undocumented territories on its way to the Pacific Ocean. The expedition sought to learn about and record the character of the Louisiana Territory, its nature, and its inhabitants. Corps members were charged with research, analysis, and documentation of the land's diverse attributes. Their efforts recorded the character of the Trans-Mississippi West and preceded the sweeping changes there in later years. These subsequent profound alterations meant that the environment and cultures as recorded by the expedition largely passed into history.

In 2003, several Committee A1F02 members rotated off the committee and new members were appointed. Our own committee (in a manner, a newly-formed

"Corps of Discovery" with tested veterans and new recruits) will gain experience, use its talents, and hone its skills and experience to direct timely, beneficial and appropriate research addressing transportation's effects on the environment. As our journey continues, the diverse talents of our members and friends will benefit the committee and will chart our course and its effectiveness. I thank members and friends for expressing their desires to serve the committee, TRB and our various professions to explore research needs, questions and innovations. Our mission is to provide a forum for transportation professionals to identify environmental research needs, to encourage the conduct of needed research, and to share information on research and issues of interest.

How can you contribute to the health and objectives of our committee's explorations? I challenge you all to consider where our committee might effect a substantial contribution in research and its application to further advance transportation delivery with sensitivity to the natural and social environments. Unlike the major changes seen after the Expedition in the Trans-Mississippi West, we want to assure that transportation's effects on our environment are slight and preferably beneficial.

The A1F02 Research Topics Subcommittee has new leadership. Dianna Noble has assumed the chair of that subcommittee with assistance from Tim Hill and Joe Shalkowski. With their connections, our intent is to keep a pool of research topics in front of TRB, NCHRP, AASHTO and the individual DOTs to tap appropriate opportunities

Chairman's Message cont'd.

and resources for research. We also shall track research in the context of the TRB Environmental Research Needs Conference findings to assure that progress occurs in addressing those needs and in publicizing that for the practitioners including those apart from the committee. I encourage you to advise the subcommittee of research opportunities.

A current focus of TRB is to have individual committees interact more formally and more frequently with other TRB committees to encourage increased synergy among all standing committees. We are charged with addressing critical and cross-cutting issues that would attract a cross-section of committees from multiple groups and sections. I believe A1F02 has a history of doing this and we are committed to finding and promoting additional opportunities. An examination of the A1F02 sponsored/co-sponsored sessions for the 2004 annual meeting reflects our committee's efforts in one venue to achieve that objective.

Our expedition promises interesting research findings. Some will be substantial while others have limited usefulness. But I hope research that we promote will assist our processes and benefit our environment. All of us have a role we can fulfill in our progress. I hope to do my best and I know you all do, as well.

To paraphrase journal entries made during the 1803-1806 expedition, "We proceed on."

Paper Time -Publications Committee

During August, when many are sitting at the beach, the A1F02 Publications Committee begins the annual process of conducting peer reviews on the papers submitted to TRB for possible presentation and/or publication at the Annual Meeting. This year a total of eight papers were submitted to A1F02 for their review. This was down slightly from the ten papers reviewed by the Committee last year.

A total of 18 different reviewers, largely drawn from the membership and friends of A1F02, critiqued the papers, making comments on how the paper may be improved, raising questions on the subject matter and recommending whether the paper should be considered for presentation at the Annual Meeting in January and whether the paper is a candidate for publication in the Proceedings of the Annual Meeting. TRB's general guidelines are that - on average - 60% of the papers are accepted for presentation and 29% are deemed acceptable for publication. This year, A1F02's reviewers recommended that all 8 papers should be presented at the Annual Meeting. Regarding publication, the Committee recommended that six of the papers should be returned to the authors with suggested modifications and two of the papers were dropped from further consideration.

In anticipation of the Annual Meeting, the Committee actively solicited papers on the general topic of Public Outreach and Education, an effort spearheaded by Joe Shalkowski. The Committee, in turn, received 3 papers on the Public Outreach topic, all of which were recommended for presentation. A1F02 will be cosponsoring a session on Public Outreach and Education with A1D04 (Committee on Public Involvement with Marcy Schwartz of that committee participating in the paper reviews), A1C06 (Committee on Social and Economic Factors of Transportation), and A1F05 (Committee on Historic and Archaeological Preservation).

Of the remaining five papers, four are recommended for an "environmental mega-poster session" sponsored by A1F02 and other environmental committees. The topics included in the four papers cover streamlining the NEPA process, the Section 7 Consultation Process and assessing cumulative effects. The final paper which addresses air quality and fuel consumption will be presented in a session jointly sponsored with the Air Quality Committee (A1F03).

As always, many thanks to the A1F02 reviewers, who once again, demonstrated a thoroughness and understanding of the subject matter reflected in their consistent and insightful comments on the papers.

James G. Bach A1F02 - Publications Committee

TRB Committee A1F02 Environmental Analysis in Transportation Mission Statement

Scope: This Committee is concerned with the protection and enhancement of the natural and human environment as an integral part of the planning, design and construction of transportation systems and projects. Emphasis is placed on research needs identification, research implementation, technology transfer, and information sharing in the following areas: environmental data collection and analysis; impacts assessment and documentation; mitigation and enhancement; systems planning, project development and management; and environmental stewardship and streamlining.

Approved by the Committee July 24, 2001 St. Louis. Missouri

TRB Annual Meeting: Washington, D.C. January 11-15, 2004 Conference website: http://www4.trb.org/trb/ annual.nsf

Announcements

TRB Annual Meeting Washington, D.C.

We hope all readers can make it to the 83nd annual meeting of the Transportation Research Board. Details are already in the mail and on the TRB website. The schedule related to the A1F02 Committee follows:

PAPER OR CONFERENCE SESSIONS:

473 (KFS04-32)

Tuesday, January 13, 10:15 - noon, Hilton, Monroe

West: Defining Bioengineering and Its Value to **Transportation Infrastructure**

Andras Fekete, RBA Group, presiding

Sponsored by A1F02 and the Committee on Task Force on

Ecology and Transportation (ADC30T)

Academic and Scientific Perspectives (P04-0656)

Richard T.T. Forman, Harvard University

Professional Practitioner Perspective (P04-0657)

Robbin B. Sotir, Robbin B. Sotir & Associates, Inc.

Federal Resource Agency Perspective (P04-0658)

Joseph Burns, U.S. Fish & Wildlife Service

<u>International Transportation Perspective</u> (P04-0660)

Hein D. van Bohemen, Road and Hydraulic

Engineering Institute, Netherlands

State Department of Transportation Perspective (P04-0661)

William Branch, Maryland State Highway Administration

374 (KFS04-33)

Monday, January 12, 7:30 pm- 9:30 pm, Hilton, Lincoln West

Environmental Construction: Final Step in Environmental Stewardship

Daniel P. Wallace, Wallace and Pancher Inc., presiding Sponsored by A1F02

Environmental Stewardship in Construction: How New

Jersey Department of Transportation Tracks

Environmental Commitments from Plans to

Construction Site (P04-0543)

Elkins Green, New Jersey Department of Transportation

Trials and Tribulations of Mitigation (P04-0545)

David Harris, North Carolina Department of

Transportation

Environmental Construction: Practical Issues That Can

Change Your Design (P04-0548)

Daniel P. Wallace, Wallace and Pancher Inc.

WORKSHOPS:

108 (KFW04-02)

Sunday, January 11, 8:30 - noon, Hilton, Lincoln East

Alternative Dispute Resolution: Successes Involving Transportation and the Environment

Denise M Rigney, Environmental Protection Agency, presiding

Sponsored by A1F02

This workshop highlights the successful use of ADR

techniques to resolve interagency or public

environmental disputes and concerns with transportation environmental issues. Case studies will show how ADR can be used throughout the project development process to increase effective coordination and to streamline

decision-making efforts.

FHWA's Guidance: "Collaborative Problem Solving:

Better and Streamlined Outcomes for All" (P04-0683)

Ruth Rentch, Federal Highway Administration

Pennsylvania: Corridor O (P04-0684)

Steven Bolt, Orth-Rodgers & Associates Inc .

Katherine Farrow, Orth-Rodgers & Associates Inc.

Berton Kisner, Pennsylvania Department of

Transportation

Texas: I-69 and Texas Environmental Resources Stewards

(P04-0685)

Dominique Lueckenhoff, Environmental Protection

Agency

Transportation Mediators and Facilitators: St. Croix

Bridge, Minnesota-Wisconsin (P04-0931)

Dale Keyes, Institute for Environmental Conflict Resolution

PUBLISHED MEETINGS:

A1F02 (KFM04-19)

Tuesday, January 13, 1:30 - 5:30pm, Hilton,

International Center A

A1F02-Environmental Analysis in Transportation

Mark S. Kross, Missouri Department of Transportation,

presiding

Sponsored by A1F02



A1F02 COSPONSORED SESSIONS

KFP04-07

Monday, January 12, 2:30 - 5:00pm, Hilton, Exhibit Hall

Environmental Mega Poster Session

Sponsored by Committee on Transportation Energy (A1F01); Committee on Alternative Transportation Fuels (A1F06); Committee on Historic and Archeological Preservation in Transportation (A1F05); Committee on Waste Management in Transportation (A1F07); Committee on Environmental Analysis in Transportation (A1F02); Committee on Transportation and Air Quality (A1F03)

Hydrogen Station Siting Through Use of Geographical Information Systems (04-5098)

Michael Anselm Nicholas, University of California, Davis

Experimental Assessment of Incentives for Alternative Fuel Vehicles (04-5004)

Laurie Wargelin, MORPACE International Thomas Adler, Resource Systems Group Lidia P Kostyniuk, University of Michigan Cris Kalavec, California Energy Commission Gary Occhiuzzo, California Energy Commission

Calibration of Fuel Consumption Model in HDM4 Model: Application to Observed Consumption in Canada and Chile (04-4054)

Hernan E De Solminihac, Universidad Catolica de Chile Robert Harrison, University of Texas, Austin Juan Pablo Covarrubias Torres, Chilean Cement and Concrete Institute

Anibal L. Altamira, Escuela de Ingenieria de Caminos de Montana, Argentina

Running Out of and into Oil: Analyzing Global Oil Depletion and Transition Through 2050 (04-2934)

David L Greene, Oak Ridge National Laboratory Janet L. Hopson, University of Tennessee Jia Li, University of Tennessee

Using the Future to Study the Past: Online Mapping to Enhance Cultural Resource Management (P04-0312) John W. Martin, GeoDecisions/Gannett Fleming, Inc. Sarah Burkett, GeoDecisions/Gannett Fleming, Inc.

Recording Historic Properties Using Three-Dimensional Scanning (P04-0314) Elizabeth Burson, Geo-Marine Inc.

Some People and Their Road (P04-0316) Dave Bibler, KCI Technologies Inc.

Preserving Mom and Pop's Modernism: Wildwood by the Sea (P04-0315)

Danial I. Vieyra, Kent State University

Zooming in on the Past: Geographic Information Systems and US-15 (P04-0319) Kristen Beckman, Skelly & Loy Inc.

Remember Me As You Pass By: Voegtly Cemetery (State Route 28, Section A35) (P04-0317)

Patricia Remy, Pennsylvania Department of Transportation

NCHRP Project 08-40 (02), FY 2003: Evaluating Cultural Resource Significance Implementation Tools (Field Test of Electronic Cultural Resource Evaluation Library and Historic Property Screening Tool) (P04-0321)

Mark R. Edwards, URS Corporation Becky Peer, URS Corporation Terry Klein, SRI Foundation

Digging Up Details of Ordinary Lives: Combining Archaeology, Oral History, and Architecture (P04-0403)

Mary S. Alfson, CHRS Inc. Kenneth J. Basalik, CHRS Inc.

Evaluating 20th Century Subdivisions: What Makes Them Eligible? (P04-0419) Mary S. Alfson, CHRS Inc.

Using Geographic Information Systems to Increase Efficiency of Large-Scale Archaeological Surveys (P04-0352)

H. Henry Ward, Parsons Brinckerhoff

Archaeological Investigation of Site 20WN1055, I-375 Improvement Project, City of Detroit: Phases I, II, and III (P04-0402)

Charles Rinehart, Louis Berger Group, Inc.

GREWE Revealed (P04-0353)

Johna Hutira, Northland Research Inc.

Buildings, Bridges, and Boundaries: Using Geographic Information Systems and Relational Databases in Historic Resource Survey (P04-0313)

John Branigan, A D Marble & Company Inc. Barbara Copp, A D Marble & Company Inc.

Blight or Site: Historic Preservation and 20th Century Communications Facilities (P04-0323)

David Rotenstein, Recent Past Preservation Network



Gone but Not Forgotten: Problems with Curation of "Old" Archaeological Collections from Transportation Projects (P04-0594)

Beverly A. Chiarulli, Indiana University of Pennsylvania Ira Carl Beckerman, Pennsylvania Department of Transportation

Chris Kula, Pennsylvania Department of Transportation

National Scenic Byways: Diversity Contributes to Success (04-5247)

William J. Kelley, Eastern Washington University

Using Environmental Management Systems to Implement Continuous Quality Improvement at State Departments of Transportation (04-5168)

Marie Venner, Venner Consulting

Steps for Implementing an ISO-Compliant Emergency Management System at State Transportation Agency (04-5096)

Marie Venner, Venner Consulting

Utilizing All Available Regulatory Flexibility: Achieving Streamlining and Conservation by Making Section 7 Consultation Decisions with Best Available Data (04-3922)

Marie Venner, Venner Consulting

Estimating Environmental Impacts of Ground Transportation in Hawaii Using Economic Data (04-3044)

Karl E Kim, University of Hawaii, Manoa Denise Eby Konan, University of Hawaii, Manoa Hing Ling Chan, University of Hawaii, Manoa

Eight-Step Process for Assessing Indirect and Cumulative Impacts of Transportation Projects (04-3952)

Cynthia Gerson Szwarckop, Louis Berger Group, Inc. J. Scott Lane, Louis Berger Group, Inc.

Streamlining NEPA Process Through Cooperative Local-State-Federal Transportation and Land Use Planning (04-3544)

Robert A Johnston, University of California, Davis Mike McCoy, University of California, Davis Marjorie Kirn, Merced County Association of Governments

Matthew Fell, Merced County Association of Governments

Modal Emissions Model for Heavy-Duty Diesel Vehicles (04-4157)

Matthew J. Barth, University of California, Riverside George Scora, University of California, Riverside Theodore Younglove, University of California, Riverside

MOBILE-Matrix: Georgia Statewide Multimodal Transportation Planning Tool Application for Rural Areas (04-2460)

Randall Guensler, Georgia Institute of Technology Karen Dixon, Georgia Institute of Technology Vetri Venthan Elango, Georgia Institute of Technology Seungju Yoon, Georgia Institute of Technology

Ozone Impacts in a National Park due to Transportation Emissions in Gateway Communities (04-4391)

Terry L. Miller, University of Tennessee Wayne T. Davis, University of Tennessee Gregory D. Reed, University of Tennessee Prakash Doraiswamy, University of Tennessee Joshua Fu, University of Tennessee Guenet Indale, University of Tennesee Andrew Goldberg, Western Carolina University

Vehicle Emissions and Performance Monitoring System: Initial Analysis of Tailpipe Emissions and Vehicle Performance (04-4434)

Robert B Noland, Imperial College London, United Kingdom

Washington Yotto Ochieng, Imperial College London, United Kingdom

Mohammed A. Quddus, Imperial College London, United Kingdom

Robin North, Imperial College London, United Kingdom

John W. Polak, Imperial College London, United Kingdom

Impacts on Population Exposure of Greenhouse Gas Abatement Measures for Urban Freight (04-4352)

Leorey Marquez, Commonwealth Scientific and Industrial Research Organization, Australia Nariida Smith, Commonwealth Scientific and Industrial Research Organization, Australia

Impact of Borman Expressway Traffic Congestion and Resulting PM2.5 Flux (04-4396)

William Henry Schneider, Purdue University Robert B. Jacko, Purdue University

Survey of Screening Procedures for Project-Level Conformity Analyses (04-3654)

Jeffrey Houk, Federal Highway Administration Michael Claggett, Federal Highway Administration

Emissions Model Development Using In-vehicle Onroad Emission Measurements (04-3410)

Hesham Ahmed Rakha, Virginia Tech Transportation Institute

Kyoungho Ahn, Virginia Tech Transportation Institute Ihab El-Shawarby, Ain Shams University, Egypt Sebong Jang, YoungDong University, Korea



Alternative Approach to VMT Estimation: Combining Traffic Count and Link Attributes (04-2474)

Fengxiang Qiao, Texas Southern University Lei Yu, Texas Southern University

Application of Small Sampling Approach to Estimating Vehicle Mileage Accumulations for Beijing, China (04-2423)

Fang Yang, Northern Jiaotong University, China Lei Yu, Texas Southern University Guohua Song, Northern Jiaotong University, China

Analysis of Speed and Temperature Effects on Mobile Source Air Toxic Emission Rates Using MOBILE6.2 Model (04-3529)

Andrew John Weeks, University of Connecticut

Estimation of Diesel Particulate Matter Concentrations in a School Bus Using Fuel-Based Tracer: Sensitive and Specific Method for Quantifying Vehicle Contributions (04-2759)

Robert G Ireson, Air Quality Management Consulting Michael D. Easter, California EnSIGHT, Inc. Michael L. Lakin, California EnSIGHT, Inc. John M. Ondov, University of Maryland Nigel N. Clark, West Virginia University David B. Wright, PCR Services Corporation

Transportation Control Measures: Federal Requirements and State Implementation Plan Development Considerations (04-2720)

Douglas S. Eisinger, University of California, Davis Debbie A Niemeier, University of California, Davis

Comparative Field Evaluation of Vehicle Cruise Speed and Acceleration Level Impacts on Hot Stabilized Emissions (04-3439)

Ihab El-Shawarby, Ain Shams University, Egypt Kyoungho Ahn, Virginia Tech Transportation Institute Hesham Ahmed Rakha, Virginia Tech Transportation Institute

New Approach to Reduce CO2 Emissions of Private Road Transport: Tradable Permit Program in Europe (04-2184)

Mark Keppens, Limburg University, Belgium Evy Crals, Limburg University, Belgium Lode Vereeck, Limburg University, Belgium

Integrated Modeling System of Traffic and Air Quality for Wide-Area Network Using Microscopic Simulation (04-4238)

Yoshifumi Shirahama, Bank of Tokyo-Mitsubishi, Japan Tetsuo Yai, Tokyo Institute of Technology, Japan Daisuke Fukuda, Tokyo Institute of Technology, Japan Shin'ichirou Tazaki, University of Tokyo, Japan

Modern Roundabouts in the United States: Efficient Intersection Alternative for Reducing Vehicular Emissions (04-2825)

Srinivas Mandavilli, Kansas State University Eugene R. Russell, Kansas State University Malgorzata J Rys, Kansas State University

Urban Transport Infrastructure and Air Quality Characteristics: Comparative Analysis of China and India (04-3097)

Jie Lin, Harvard University Sumeeta Srinivasan, Harvard University Peter P. Rogers, Harvard University

PM2.5: Next Challenge for Transportation Conformity (04-3955)

Jonathan Makler, Harvard University

Portable Emissions Measurement Systems: Lessons Learned (04-4988)

Laurence R Rilett, Texas A&M University System Josias Zietsman, Texas Transportation Institute Seung-Jun kim, Texas A&M University

Methodology for Deriving Vehicle Activity Parameters from Travel Survey Databases (04-4659)

Mohan Venigalla, George Mason University Soujanya Chalumuri, George Mason University

Subcommittee Reports

TRB Task Force on Environmental Justice in Transportation (A1T52)
2003 TRB Annual Meeting Summary
By Joe Shalkowski
HDR Engineering, Inc.

The A1T52 TRB Task Force on Environmental Justice (EJ) in Transportation met on January 15, 2003, at the TRB Annual Meeting in Washington, D.C. Lori Kennedy of APAC chairs the Task Force. The following provides an overview of the meeting discussions and Task Force activities:

- Task Force members and friends were welcomed. A current listing of members and friends was circulated for updating.
- Lori Kennedy reported that the Task Force sponsored a very successful TRB conference session titled, Innovative Planning Tools to Address Title VI and Environmental Justice, which was held on January 13 at the Annual Meeting.
- Anne Morris provided a presentation on the topic of illiteracy. Anne indicated that 'The State of Literacy in America" could be found at www.nifl.com.
- Task Force committee liaisons provided summaries of other EJ related issues being dealt with by other TRB Committees. Research related EJ issues were also discussed.
- It was reported that the Third National Community Impact Assessment (CIA) Workshop was held in August 2002 in Madison, Wisconsin. Future CIA workshops will be held in Spokane and Indianapolis. The next national workshop will be held in 2004 in Portland, ME.
- There will be a TRB call for papers on EJ in 2003. It
 was discussed that the call for papers should be cross
 cutting (e.g. freight, equity, health, air quality, EJ
 evaluation plan analysis and safety).
- This year's TRB Summer Meeting for the Task Force on EJ in Transportation was held in Portland, Oregon, July 13-18, 2003.

Website Subcommittee Goals, Objectives and Procedures

Goal: Provide a resource to the members and friends of the TRB A1F02 Committee and other professionals to keep updated on Committee activities and transportation-related environmental research and other information.

Objectives:

- Provide environmental professionals with links to other websites that provide environmental information pertinent to the transportation industry.
- Provide timely information on environmental issues.
- Seek news articles and meeting announcements from a variety of environmental sources on topics that are

- unlikely to receive attention in other publications.
- Provide information on A1F02 committee and subcommittee activities (e.g. member's information, publications, meeting minutes, etc.) that would give the web site users current information and provide a personal connection to the committee.
- Create and maintain the listserve for immediate news dispersal and a communication forum between participants.
- Posting the Committee's newsletter on the website, including past issues.

General Procedures:

- The Website Subcommittee Chairperson is appointed by the Chair of the A1F02 Committee and serves as facilitator of the website.
- Members of the website subcommittee are selected by the chairperson to assist with all subcommittee activities.
- The Website Subcommittee Chairperson will be the point of contact with the website hosting organization and the website designer to coordinate updates.
- The members of the website subcommittee will collect and assemble materials for posting on the website and submit proposed information to the chairperson.
- The website subcommittee chairperson will send out a request for articles, announcements and other newsworthy information to the A1F02 Chair, all subcommittee chairpersons, and all interested parties periodically throughout the year.
- Suggested topics for the website include:
 - ♦ A1F02 Chair's message
 - ♦ Committee and Subcommittee reports/meeting minutes
 - Members section that provides information on each committee member
 - Listserve for news/information dispersal and communications
 - Resource Center with links to websites
 - ◆ Committee Newsletters
 - ◆ Documents and publications sponsored by A1F02
 - ♦ Links to other TRB Committee websites
 - Notices and information on Mid-year and Annual meetings
 - Notices about other upcoming workshops, conferences, meetings or events of probable interest to Committee members and friends
 - ♦ Requests for information
- The chairperson shall submit a written report of the subcommittee's accomplishments and planned activities to the Chair at each annual meeting and Mid-year workshop.

Adopted by the Committee (to be determined), Washington, DC



Wilmington summer meeting. Carol Cutshall, former chair of A1F02, received a set of pennants for her sailboat. The pennants connected spelled "TRB A1F02." She was also presented with a pennant license plate that spelled "TRB." Committee members present at Wilmington (who could be contacted on short notice) held the pennants and made the presentation.

Regional Transportation Planning With a Difference: Expanded Environmental Analysis, Cumulative Impacts Analysis, GIS Growth Scenarios Modeling and Innovative Public Participation Energize Planning in Merced County, California Brian J. Smith, Deputy Director, Planning and Modal Programs, and A1F02 member brian_smith@dot.ca.gov Sharon Scherzinger, Chief, Office of Regional and Interagency Planning Katie Benouar, Senior Transportation Planner Dara Wheeler, Associate Transportation Planner

Reacting is easy. Meeting transportation challenges head-on and early requires collaboration, innovation, inspiration and determination. The Merced Partnership for Integrated Planning is an example of the transportation community reaching out to others to improve mobility while protecting and enhancing community values and natural resources.

California Department of Transportation

Meeting transportation needs in a rapidly growing region is often frustrated by the introduction of environmental concerns late in the transportation planning and project delivery process. When unanticipated environmental issues surface during project delivery, delays occur and costs rise. The public is not well served by conflicts among federal and state resource and permitting agencies and state and local project sponsors.

Seeking ways to address this problem, the Federal Highway Administration (FHWA), the US Environmen-

tal Protection Agency (US EPA) and the California Department of Transportation (Caltrans) signed an agreement in July 2000 to work together and commit resources to "support concerted, cooperative, effective and collaborative work among the three agencies in the transportation and environmental planning processes". One direct result of this agreement was the initiation of a specific environmental streamlining project.

Merced County in California's Central Valley was chosen as the site of the pilot project called the Partnership for Integrated Planning (PIP). The Merced County Association of Governments (MCAG) is the regional agency and MPO responsible under state and federal law for transportation planning, programming and project delivery in this area.

The Challenge

Merced County is an agricultural community facing tremendous population growth and development pressures. Sitting on prime agricultural land and served by two major north-south highways -Interstate 5 and State Route 99- Merced County needs major transportation improvements to meet current demand and prepare for future growth in the region. Both corridors carry not only local travel and agricultural products; they are also major inter-regional, interstate and international travel and goods movement routes.

By 2030, Merced will double its population to over 417,000 people, and double its jobs base to 132,000. Currently Merced County's population is ethnically diverse, and has a high (15%) unemployment rate. Twenty-five percent of Merced County's employed population commutes outside the county to work.

The 10th campus of the prestigious University of California system has started construction on the outskirts of the City of Merced. The first research university to be constructed in the 21st century, it will include a planned community providing housing opportunities for students, faculty and support staff. Planning for the transportation needs of this new community will require a broad focus including - transit, bicycle and pedestrian facilities.

Merced County also possesses the rich biodiversity and sensitive habitats characteristic of California. Air quality has become a critical issue not only for transportation planning, but also for the agricultural industries that drive the region's economy. Protecting the natural environment is important, but so is creating jobs for the small communities in the county. These competing needs, and the uncoordinated land use decision-making that is typical in California, make regional transportation planning challenging.

The Merced PIP was launched in 2001 with the following goals:

- Formulate a model transportation planning approach incorporating environmental concerns in the 2004 Regional Transportation Plan (RTP) update
- Conduct an in-depth environmental study (Environmental Impact Report pursuant to state law) for the RTP
- Streamline the project delivery process
- Use and evaluate GIS tools to model land use with transportation projects and environmental information
- Develop approach and methodology for assessing cumulative impacts of transportation projects in the RTP
- Lessen environmental impacts: avoid, minimize and mitigate
- Develop a progressive public education and involvement process

The centerpiece of PIP is the development of the RTP. The innovative RTP process is being used to explore the cumulative impacts analysis of transportation and land use decisions within the 26-year horizon of the plan. The scope is regional, at the plan level, rather than focusing on individual projects. The RTP process is sufficiently flexible to allow modifying transportation projects in the planning stage if significant cumulative impacts are identified. Later project level analysis can then refer back to and build upon regional analysis done in the RTP. In the RTP process it is possible to examine a group of projects with their collective impacts on endangered species and habitat, wetlands and prime farmlands.

Innovation Supporting Collaboration

Planning, funding, developing, operating and maintaining modern transportation systems requires the cooperation and collaboration of many organizations at all levels of government, and the explicit approval of the public. While it is easier for single stakeholders to unilaterally say NO, very few if any agencies can unilaterally say YES to approving and funding transportation system improvements.

The goal of collaborative planning is straightforward: Community needs for infrastructure and resource protection, conservation and enhancement are met by a progressive sequence of well-informed decisions at the local, regional and state levels.

Achieving that goal in today's ever-changing political, fiscal and environmental world is challenging.

MCAG was up to the challenge of embarking on a new way of doing the RTP due in 2004. MCAG is known for innovative planning, extensive public outreach to its cities and its many small agricultural communities. Its advanced GIS capabilities made it a good candidate for testing the integrated planning concept. MCAG already had GIS layers containing parcel level base maps, street and road configurations, soils information, wetland and cultural resource boundaries and hazardous materials sites. MCAG also had experience in multi-agency planning efforts and cultivating local support through efforts to establish a county half-cent sales tax and a development impact fee to fund transportation projects.

PIP has used the GIS-based UPLAN model for transportation and urban growth scenario analysis, mapping and graphic presentations to public meetings. A team from the University of California, Davis, consisting of Dr. Robert Johnston, Mike McCoy, and Stephanie Peck tailored UPLAN to support the Merced PIP. Users can change the assumed growth rates or other basic assumptions and can set various environmental and social attractors and constraints to growth such the built environment, sensitive habitat, or agricultural lands. Policy tests can be undertaken including changing the general plan, setting urban growth boundaries, preserving habitat and open space, and providing or denying transportation improvements. Infrastructure costs are being built into a future version of UPLAN. By graphically displaying future growth scenarios, MCAG staff can engage the public in spirited debate on the consequences of land use decisions and their vision of growth. The MCAG staff attributes much of the interest in PIP and the success of the public outreach to the use of the UPLAN maps.

Another innovative aspect of PIP is the early involvement of the resources and permitting agencies. The PIP Steering Committee that meets regularly includes Caltrans, FHWA, US EPA, UC Davis and MCAG. MCAG has also met with and received data from the regional offices of the California Department of Fish and Game and the US Fish and Wildlife Service regarding habitat plans in the region. All the key agencies attended a stakeholders meeting in late October 2003 to hear about the status of PIP, the progress of the environmental study to date and the environmental assumptions being used. The federal and state permitting agencies will

have the opportunity to express their concerns regarding regional transportation impacts, to add any relevant data concerning resources, plans and programs they have for RTP consideration, and to provide input into the assumptions being used. Non-governmental stakeholder groups such as The Nature Conservancy have also participated.

To improve collaboration in preparing the environmental impact report for the RTP, Caltrans biologists, state and federal resource agency staff are working with Merced County to develop GIS environmental data layers for the EIR. The stakeholder agencies will have the opportunity for input as this data-gathering phase is being completed and prior to the development of plan alternatives. With this unprecedented look at transportation improvements in the planning stage, the resource agencies may be able to suggest habitat avoidance and mitigation strategies at the regional, corridor and landscape scale. The goal of the early input is to identify concerns in the planning stage when they can be addressed and to avoid later conflicts in the project development and construction phases. The timing of this input by the federal and state resources agencies is unusual. The PIP Steering Committee will evaluate the effectiveness of this approach and will seek to keep the stakeholders involved throughout the process.

Finally, a cumulative impacts team made up of MCAG, Caltrans, University of California Davis (UC Davis) and several resources agencies including US EPA, FHWA, NOAA Fisheries, State Office of Historic Preservation, US Army Corps of Engineers, US Fish and Wildlife Service will produce a methodology for analyzing cumulative impacts in the Merced RTP.

Inspiration and Determination

Developing a vision is essential to establishing what community values must be protected and enhanced, and for evaluating the desirability of alternative future courses of action. A vision can inspire action to positively change the future and define ways the transportation system can support that change. Meeting from February though September 2003, the Merced community has developed its vision, transportation-related goals and problems, and possible solutions.

Supporting public participation has been a labor-intensive effort on the part of MCAG staff including Executive Director Jesse Brown, Deputy Executive Director Marjie Kirn, Candice Steelman and Rich Green. Over 800 county residents have been involved through workshops, telephone surveys or on-line questionnaires. Focus groups representing business/education, the Southeast Asian community, the Latino community, environmental and outdoor recreational interests, seniors, agriculture, commuters and youth provided additional forums and input. Over 32 meetings per quarter have been held. From this effort, the community approved the following vision themes for the transportation plan:

- Provide a good system of roads that are well maintained, safe, efficient and meet the transportation demands of people and freight
- · Provide a transit system that is a viable choice
- Support full-time employment with livable wages, i.e. support job creation and economic vitality
- Preserve productive ag land and maintain or mitigate negative impacts to the environment
- Support orderly and planned growth that enhances the integration and connectivity of various modes of transportation
- Support clean air and water and avoid, minimize or mitigate negative impacts to the environment.

The member agencies of the Merced PIP Steering Committee have dedicated staff, time and funding to make PIP a reality. Despite state and federal budget problems, Suzanne Marr, Nova Blazej and Erin Foresman of US EPA, and Sue Kiser, Bill Haas, Brian Zewe and Stephanie Stoermer of FHWA have helped Caltrans keep the original partnership alive and played a key role in federal agency participation. This sort of commitment is the underpinning of the project. The Steering Committee hopes to share the UPLAN tool and the techniques for public involvement and agency involvement with others in the transportation community. Now more than halfway through, one early lesson learned is that commitment of the partners to put in time and resources is critical. The partners must embrace the goal of a better-integrated planning process and be willing to modify the way they do business to arrive there. The agencies involved must be able to carry out their specific missions while at the same time serving the needs of the community. So far, participants are maintaining their enthusiasm and optimism that this process represents an improvement over business as usual and they are making the commitment.

Perhaps most importantly, this project has continued to receive the support of local elected officials. This is critical since it is these local officials who must make future land use decisions, and who sit on the board of the regional transportation agency deciding which future projects and services to pursue.

That commitment will be needed in January 2004 as the project moves to examining RTP scenarios representing various proposed alternatives for transportation development over the next 26 years. Through another round of public participation workshops and meetings with the governing bodies of all the cities in the county as well as the County Board of Supervisors and the MCAG Board of Directors, the preferred alternative will be selected in March 2004. The RTP will then be finalized and published in the summer of 2004. Upon completion of the project, the Steering committee, community participants and focus groups will all be asked to evaluate the process. MCAG, Caltrans, US EPA, UC Davis and FHWA will use the evaluation to develop lessons learned and best practices to be shared for

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replicating the successful elements of PIP in other regions of California.

Despite severe funding shortfalls of over the last several years, Caltrans, FHWA and US EPA have been able to meet their commitments in supporting the enhanced planning and public outreach activities at the heart of the PIP because of the perceived benefits not only to Merced, but as a model for export to other regions.

I-69 TCC

By RICHARD GOLDSMITH Environmental Affairs Division RGOLDSMI@dot.state.tx.us Texas Department of Transportation

In 2002 Texas Gov. Rick Perry challenged TxDOT to create during the next half century a transportation project that will rival the interstate highway system. Perry's vision is to build super corridors with:

- Three passenger lanes in each direction
- Two truck lanes in each direction
- Three rail lines (high-speed passenger, commuter, freight) in each direction
- A 200-foot-wide easement for utilities, such as fiber optic cable, pipelines for water and petrochemicals.

Dubbed the Trans-Texas Corridor (TTC), the system will not pass directly through major urban areas. Instead, TTC is meant to divert through traffic away from developed areas, thus speeding cross-country travel, while easing congestion and cutting pollution from vehicle emissions in urban areas.

Gov. Perry signed legislation in June 2003 giving TxDOT the authority to proceed with development of the Trans-Texas Corridor. Texas' 1,000 miles of I-69, with 13 to 15 Segments of Independent Utility (SIUs), now will include design elements of TTC. I-69 is one of the original 21 Congressional High Priority Corridors in ISTEA (1991) and also was chosen in 2002 as a streamlining pilot project under TEA-21, Section 1309.

TxDOT has been formulating a strategy that would allow I-69 to progress while integrating the proposed TTC cross-section that adds rail and utility components. A single, contiguous corridor incorporating the Governor's vision (TTC) and I-69 is preferable, but will be one of several corridor alternatives examined. Cost, engineering, or environmental implications may dictate that I-69 and other modes must proceed in separate corridors.

To build 4,000 miles of multi-purpose transportation corridors each up to 1,200 feet wide, TxDOT quickly realized that a priority would need to be placed on identifying and preserving up to 900 square miles of right of way, or more area than the state of Rhode Island.

The overall goal is to develop an environmentally sound, publicly supported Trans-Texas Corridor that can

be built in a timely manner. Avoidance and minimization of adverse environmental impacts is paramount.

- Concepts to accomplish that end include:
- A tiered NEPA approach.
- Streamlining the environmental process.
- Internal training on streamlining strategies.
- Instead of the piece-meal mitigation efforts of the past, a broad ecosystem approach to mitigation to compensate for unavoidable impacts. (See related story on TERS, Texas Environmental Resource Stewards.)
- The use of mitigation banks.
- Within areas that do not meet standards for air quality, federal transportation conformity requirements affecting transportation apply. Texas has 16 non-attainment counties and 25 that could be listed under new standards. Where possible, TTC will be designed to avoid the 16 non-attainment and 25 near non-attainment counties so that local conformity plans in these counties will not need to be adapted to include TTC.
- Transportation corridor preservation to minimize impacts and costs that would otherwise result from development encroaching upon desirable routes.
- Early cooperation and collaboration with resource agencies to set mitigation policy to foster resource agency buy-in early in the process.
- Reducing field surveys by using technology such as GIS tools to identify priority resources.

With FHWA concurrence, TxDOT concluded that a tiered environmental process would allow continuous project progression. The Tier 1 process would use the QUANTM and the EPA's Region 6 Geographical Information Systems Screening Tool (GISST) processes to determine where rail and utilities can remain contiguous to the vehicle highway lanes. This will produce a smaller study area and allow early corridor preservation for the rail/utility component while the vehicle component continues to the Tier 2 environmental process with its detailed location studies.

QUANTM is a GIS planning tool that generates planning alignments that satisfy defined constraints. GISST is an environmental assessment tool that takes a systematic approach to cumulative and multiple environmental impacts.

As proposed, the Tier 1 environmental process will use Stages 1 and 2 work scopes. Stage 1 will include data collection, study area development, TTC/I-69 purpose and need development, and public involvement. Stage 2 will include the TTC/I-69 corridor alternatives development and analysis, selecting preferred corridors, and the Tier 1 EIS and ROD. TxDOT anticipates that the Tier 1 process can be completed in 12 to 18 months. The Tier 1 ROD would support a location decision only. After the Tier 1 process, the TTC/I-69 freeway component would proceed to Tier 2, which includes Stages 3 and 4 and the deferred Stage 1 and 2 tasks. The Tier 2 process would

produce the I-69 ROD for design and construction of the vehicle lanes, but Tier 2 would be delayed for the rail and utility components until the need for those facilities is realized.

The I-69 NEPA process and Project Development Process Manual were revised to incorporate the tiered environmental process. The Tier 1 environmental process will result in preferred corridor(s) location decision only and the Tier 2 environmental process will include the detailed analysis required for the I-69 only design and construction decisions.

Gov. Perry gave TxDOT an ambitious goal with huge environmental considerations. The agency is cooperating with its resource agency partners to create a process that will meet that challenge.

The Texas Environmental Resource Stewards (TERS)

H. G. Quinn Environmental Affairs Division hquinn@dot.state.tx.us Texas Department of Transportation

The Texas Environmental Resource Stewards (TERS) is a multi-agency collaborative approach to identifying and protecting priority ecological resources. This is the first statewide effort to bring natural resource leaders at the state and federal levels together for joint identification of resource priorities that are critical to Texas' unique natural resource legacy.

TERS was formed in July, 2002 at an executive level meeting hosted by the regional EPA administrator. Members include representatives of the Texas Department of Transportation (TxDOT), Environmental Protection Agency (EPA), U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Federal Highway Administration, Texas Parks and Wildlife Department (TPWD), Texas Commission on Environmental Quality (TCEQ), governor's office, and the Nature Conservancy of Texas. The goals of the group are to identify high priority ecological areas and potential mitigation areas, while streamlining the regulatory processes. "Agreeing on what is important is not easy," said Dominique Lueckenhoff, transportation liaison with EPA. "Leaders of each agency are involved in and support the process. TERS is designed to improve how we collaborate in areas of ecological concern with our sister agencies."

An interagency scoping team was appointed to make key recommendations to the leaders on how to accomplish goals. They focused their efforts on two items: 1) the evaluation of processes and innovative methods to streamline implementation of mitigation for large projects, while protecting and conserving highly sensitive resources; and, 2) the application of a GIS-driven, rapid ecological assessment protocol tailored for Texas.

Following the scoping team's recommendations, TERS uses an ecological assessment approach to identify high priority areas within each Texas ecological region (according to TPWD, Texas has 11 so-called "ecoregions"). Potential mitigation areas for large scale projects are also identified. This information assists in streamlining regulatory requirements for transportation projects as directed by Executive Order 13274 and Section 1309 of the Transportation Equity Act for the 21st Century.

The use of a GIS based tool that uses data to prioritize ecological resources across the state further streamlines the process. The GIS tool is based on the scientifically proven EPA Region 5 GIS-driven ecosystem health evaluation model. The core evaluation criterion includes conservation based on ecological diversity, sustainability of habitat, and rarity. There are presently over 70 data sets in the system - everything from soil types to the locations of bird rookeries. The GIS data is continually reviewed, edited and updated and is readily available to the district engineers and project contractors through a website.

"A big focus of TERS is planning," said Dianna Noble, director of TxDOT's Environmental Affairs Division. "TERS will help us avoid and minimize impacts on the environment."

The main arena for the effective use of TERS is dealing with large projects. The first project using TERS is the mammoth I-69 corridor which stretches nearly 1, 000 miles from the Mexican border near Laredo east to Houston and north to the Arkansas border. "TERS will identify problematic areas early in the planning process," said Jimmy Tyree, a TxDOT TERS representative. "The advantage of using TERS-generated data on a project is that it will be faster, provide better collaboration among agencies and identify priority areas that need to be avoided."

The immense scale of I-69 will provide an opportunity to expand the data sets for the GIS system and 'fine tune' the TERS approach to solving new challenges in protecting the environment while efficiently moving the project ahead. TERS is an open ended system that is constantly updated and improved. It is an excellent tool for protecting Texas' important environmental resources while meeting the demands of large transportation projects.

Environmental Streamlining Dynamics and Fundamentals

By Joe Shalkowski, Practice Leader Joe.Shalkowski@hdrinc.com HDR Engineering, Inc.

In today's economic climate, everyone in the transportation industry is aware of the emphasis being placed on budget and schedule. Calls for streamlining the transportation project development process are echoed loudly in Washington, D.C. and in most states - often in the form of proposed new laws and regulations. The NEPA phase of project development seems to have the biggest bull's-eye on its back, being the target of much of the streamlining effort. As a result it is now incumbent upon transportation professionals to understand the

dynamics and fundamentals of environmental streamlining.

Streamlining Dynamics

The dynamics of environmental streamlining involve a variety of synergies, including the integration of different processes; the cooperation of multiple stakeholders with different interests; the practice of stewardship; the identification and implementation of "best practices"; the creative and innovative use of leading-edge technology; and a commitment to sound science and quality analysis.

The combination of these synergistic activities enables individual transportation projects to advance through the project development process in a streamlined fashion. The metrics of streamlining seem to focus on delivery time, cost, and the number of obstacles encountered during project development. If any one of the synergistic activities are derailed, the streamlining dynamic can be interrupted, often resulting in project delays, mounting costs, and an increased sense of frustration.

By being familiar with the origins of environmental streamlining and aware of the ongoing efforts to enhance the opportunities for streamlining, valuable lessons can be drawn upon and applied to keep projects on track or get derailed projects back on track.

Origins of Streamlining and the NEPA Umbrella

NEPA often gets the blame as being the real culprit in causing project delays. However, if there were no NEPA process (that is, if it were repealed as the ultimate streamlining fix) nothing would likely change in the delivery time or cost of a transportation project. In fact, it might very well become worse, as policy makers would set out to invent a new process that would eventually embody all the environmental streamlining components already built into the NEPA process.

As the legislative and regulatory record demonstrates, the origins of environmental streamlining are rooted in the policies and directives set forth by NEPA. The NEPA implementing regulations enacted by the Council on Environmental Quality (CEQ), as administered by all federal agencies, call for cooperative consultation with agency and public stakeholders; the reduction of paperwork and delay; the placement of appropriate time limits on the NEPA process; and the integration of NEPA with other environmental laws and processes. The integration of these individual but often interdependent regulatory processes into a consolidated environmental decision-making process is usually illustrated as the NEPA regulatory umbrella. In effect, once the NEPA process has been completed, the requirements of a host of other state and federal regulatory processes should have also been satisfied.

There is an obligation for transportation and environmental professionals to understand these processes relative to how they fit together, where they contrast and where the streamlining opportunities exist when they are integrated. Misunderstanding or disregarding any one of the integrated laws or processes will likely interrupt and delay a project's advancement. Consequently, transportation professionals must regularly monitor a number of published and online sources to stay abreast of newly proposed or adopted policy and case law.

Other Streamlining Initiatives

A primary tool for environmental streamlining is the use of cooperative agreements among agencies holding project approval, review and/or permitting jurisdiction. The streamlining provision of Section 1309 in the Transportation Equity Act for the 21st Century (TEA-21) advocated the use of such agreements to specify and document the cooperative expectations that are agreed to among the different agencies. These agreements can include items such as timeframes for reviews and procedures for permit procurement and other agency approvals. Recent history has shown - in the form of new programmatic agreements, general permits, Memoranda of Understanding (MOUs), formalized dispute resolution procedures, and now computer-based NEPA

documentation databases (e.g. "turbo" Categorical Exclusions and Environmental Assessments) - that improved interagency cooperation at all levels of government has become critical to the success of environmental streamlining.

President Bush took the most recent action on environmental streamlining, with a September 18, 2002, Executive Order that mandates executive departments and federal agencies promote environmental stewardship in the nation's transportation system and expedite environmental reviews of high-priority transportation



infrastructure projects to be identified by the secretary of transportation. Executive Order 13274 - known as Environmental Stewardship and Transportation Infrastructure Project Reviews - also calls for agencies to support the U.S. Department of Transportation (USDOT) in formulating and implementing policy and procedural mechanisms that enable agencies to conduct environmental reviews in a timely and environmentally responsible manner.

Proposed Streamlining Legislation

Until Congress approves - and the president signs - a TEA-21 reauthorization bill into law, hopefully within the next year or so, the streamlining provisions of Section 1309 will remain in effect. It should be noted that the effectiveness of the streamlining provisions put into place so far is still up for debate. Also, with no prospect of FHWA and FTA issuing new NEPA/Section 4(f) regulations or new statewide and metropolitan planning regulations before the next reauthorization, everything should remain status quo.

In the meantime, momentum to sway and influence the environmental streamlining language in the reauthorization bill continues to build. New legislation centers on Senate Bill 3031, entitled "Maximum Economic Growth for America Through Environmental Streamlining Act" or MEGA Stream, and House Bill H.R. 5455, entitled "Expediting Project Delivery to Improve Transportation and the Environment Act" or ExPDITE Act. Both would more clearly define how transportation projects should be reviewed under NEPA. Notably, the bills would redefine responsibilities for federal and state transportation agencies, set deadlines for agency reviews, and timeframes for the filing of lawsuits that challenge decisions. Also, on April 19, 2002, AASHTO issued a series of seven reauthorization policy papers highlighting its recommendations for new stewardship and streamlining legislation. The seven target issues include: stewardship initiatives, improving the linkage between planning and NEPA, reforming the NEPA process, reforming Section 4(f), the delegation of environmental responsibilities, establishing time limits for legal claims, and enhancing the oversight and management of environmental reviews.

Quality, Stewardship Lead the Way to Streamlining

Overall, a commitment to quality greatly enhances the prospect of advancing a project through a streamlined process. Review agencies tend to be more cooperative and flexible when working with sponsoring agencies that have reputations for quality. Many of the complaints regarding review time, the reluctance to conduct concurrent reviews, and the inability to resolve disputes - which are now trying to be addressed legislatively through the force of law - seldom rise to become points of consternation when there is a commitment to produce quality work.

There is lasting value when a project team pays consistent attention to the details of the project development process and to the quality of the documentation circulated for review. Successful efforts most often require the dedication of technically astute leadership that can draw upon and selectively apply an assortment of proven best practices and leading-edge innovations in process and technology.

Perhaps most importantly, transportation and environmental professionals must understand that the backbone to environmental streamlining is environmental stewardship. The most concise definition of stewardship is simply paying attention to one's surroundings. Being a good steward of the environment goes beyond just complying with the regulations; it involves the attitude, ethics and commitment of individuals involved in projects that impact the natural, cultural and socioeconomic environment. In practical terms it involves being proactive in developing transportation projects that actually serve and enhance and not just "use" and mitigate.

There is a prominent viewpoint from many conservation groups and environmentalists that streamlining without the application of environmental stewardship principles is just a ploy to get around current environmental laws and protections simply for the sake of saving time. They often are very vocal and influential in their opposition to streamlining legislation based on the belief that transportation officials will try to circumvent the process and turn back the environmental policies already on the books. Changing this perception of the transportation profession can go a long way in streamlining an already complicated environmental process.

The preceding article was adapted from the January 2003 issue of TransportLine, published by HDR Engineering, Inc. Joe Shalkowski can be reached in HDR's Pittsburgh, Pennsylvania, office at (412) 497-6076, fax (412) 497-6080 or email jshalkow@hdrinc.com.

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Editor's Notes

by Mark Kross

Missouri Department of Transportation

Thanks to those who contributed feature articles for this newsletter. I also appreciate information others supplied. I encourage all subcommittee chairs, any other members, friends of the committee and others to submit announcements, subcommittee reports, research news, requests for information and features.

I hope to see you all at the 2004 annual TRB meeting in January.

Newsletter Guidelines

Major Headings:

Chairman's Message Requests for information

Announcements Features
Subcommittee Reports Editor's Notes

Research News

Submittals should be formatted to 8 $\frac{1}{2}$ " x 11" size, typewritten in caps and lower-case, single spaced, flush left margin. Subject and author should be provided as part of the text. My preferred word processing software is Microsoft Word (although I should be able to translate/convert most other applications). Articles may be submitted as hard copy with a 3.5" disk, or by fax or e-mail to the Newsletter Editor:

Mark S. Kross

Assistant to the Director of Project Development

- Environment

Project Development

Missouri Dept. of Transportation

P.O. Box 270

105 West Capitol Avenue

Jefferson City, MO 65102

Phone: 573-751-4606 Fax: 573-526-3261

e-mail: krossm@mail.modot.state.mo.us

Subcommittee chairs are expected to submit reports on committee activities. Announcements, Research News, Features (e.g., reports on activities or news of interest) and Requests for Information may be submitted by anyone.

Please feel free to submit articles anytime during the year, but recognize that we expect to publish in May and November.

The TRB A1F02 Newsletter is published twice a year by Michael Baker, Jr., Inc., 770 Lynnhaven Parkway, Suite 210, Virginia Beach, Virginia 23452. Committee A1F02 truly appreciates that firm's assistance. We appreciate the assistance of the Center for Transportation and the Environment (CTE) at North Carolina State University for posting the electronic newsletter on the A1F02 web site at http://www.itre.ncsu.edu/A1F02/default.htm.

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TRB A1F02 News Environmental Analysis in Transportation

Michael Baker Jr., Inc. 770 Lynnhaven Parkway, Suite 240 Virginia Beach, VA 23452